AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An unmanned dispensing station for laboratory items, comprising:

- an input terminal for identifying a user and authenticating said user;
- a central processing unit connected to said input terminal;
- an output unit comprising a sensor device connected to said central processing unit;
- a memory device connected to said central processing unit; and
- a communication interface for transceiving data, connected to said central processing unit;

wherein said output unit comprises a locking mechanism to unlock said output unit for access of said user and to close and lock said output unit to prevent unauthorized access, and wherein said output unit comprises a refrigerating or freezing device for cooling or freezing of items comprised in said output unit, wherein said laboratory items are contained in said refrigerating or freezing device, and wherein said refrigerating or freezing device comprises a plurality of zones with different temperatures or comprises at least one zone, the one zone having a temperature gradient,

wherein said output unit is configured to contain at least a first group of laboratory items arranged in a first order with at least one item of said first group located in a dispensing position, to be withdrawn from said output unit by said user,

wherein said sensor device is positioned in the vicinity of said dispensing position to detect a withdrawal,

wherein said memory device is adapted to store dispensing transaction data comprising the identity of said authorized user and the item group of said item, as well as withdrawal timing information,

wherein said central processing unit is adapted to control said locking mechanism to unlock said output unit upon successful authentication of said user, and to close and lock said output unit upon termination of a dispensing transaction, wherein said central processing unit is adapted to read dispensing transaction data from said memory and to send it to said communication interface.

~~and wherein said input terminal comprises an access device configured to receive a personal identification module of said user, wherein said access device is adapted to read personal authentication data stored on said personal identification module, to compare it with user authentication data stored in said memory device and to issue an authentication signal to said central processing unit upon matching of said read and said stored data.~~

2. (Canceled)

3. (Previously Presented) The dispensing station according to claim 1, wherein said access device is adapted to lock said personal identification module during a dispensing transaction, and to release said personal identification module for removal by said user only after said locking mechanism has locked said output unit subsequent to the termination of a dispensing transaction.

4. (Previously Presented) The dispensing station according to claim 1, wherein said access device comprises an output section adapted to write dispensing transaction data to said personal identification module.

5. (Previously Presented) The dispensing station according to claim 1, wherein said input terminal comprises:

- a scanning device for scanning biometrical data of said user, adapted to compare said data with biometrical user data stored in said memory device and to issue an authentication signal to said central processing unit upon matching of said scanned and said stored data;

wherein said biometrical data is selected from the group containing fingerprint, eye iris, face image and voice data.

6. (Previously Presented) The dispensing station according to claim 4, wherein said input terminal comprises:

- a display for displaying user instruction and dispensing status information; and
- an input device for entering a personal identification code of said user;

wherein said access device is adapted to transfer said personal identification code to said memory device, and said output section is adapted to delete any personal identification code stored on said personal identification module.

7. (Currently Amended) The dispensing station according to claim 1, wherein said authenticating comprises determining that the user belongs to a particular group of users, and that the particular group is allowed access to one or more laboratory items, wherein said access device comprises an output section adapted to write dispensing transaction data to said personal identification module, and wherein said wireless communication module comprises a transmission section for preparing dispensing transaction data for transmission to a web site and for sending a short message (SMS) containing dispensing transaction data to at least one phone number.~~wherein said output unit comprises a refrigerating or freezing device for cooling or freezing of items comprised in said output unit, wherein at least all said laboratory items are contained in said refrigerating or freezing device, and wherein said refrigerating or freezing device may comprise a plurality of zones with different temperatures or one or more zones with a temperature gradient.~~

8. (Previously Presented) The dispensing station according to claim 1, wherein said input terminal comprises a printer adapted to print out dispensing transaction data.

9. (Previously Presented) The dispensing station according to claim 1, wherein said communication interface comprises a wireless communication module for wireless transmitting of said dispensing transaction data to at least one destination address.

10. (Previously Presented) The dispensing station according to claim 9, wherein said wireless communication module comprises a transmission section for preparing and sending an electronic mail containing dispensing transaction data to at least one destination address.

11. (Previously Presented) The dispensing station according to claim 9, wherein said wireless communication module comprises a transmission section for preparing dispensing transaction data for transmission to a web site.

12. (Previously Presented) The dispensing station according to claim 9, wherein said wireless communication module comprises a transmission section for preparing and sending a short message (SMS) containing dispensing transaction data to at least one phone number.

13. (Previously Presented) The dispensing station according to claim 1, wherein said output unit comprises at least one movable tray adapted to be displaced between said dispensing position in which said tray is aligned with said order of said group of items to

receive one of said items, and a removal position in which said tray is positioned to enable said user to remove an item.

14. (Previously Presented) The dispensing station according to claim 9, wherein said wireless communication module comprises a receiving section for receiving restocking data comprising an item identification and an amount of reloaded items, wherein said receiving section is adapted to transmit said restocking data to said central processing unit for updating the content of said memory device according to said restocking data.

15. (Previously Presented) The dispensing station according to claim 13, wherein said output unit comprises at least two trays, and said locking mechanism is adapted to selectively lock and unlock at least one of said at least two trays, and said central processing unit is adapted to control said selective locking or unlocking depending on said authorization of said user.

16. (Currently Amended) A method of dispensing laboratory items, comprising:

- identifying and authenticating a user;
- unlocking an output unit for withdrawal of items by said authenticated user;
- sensing a dispensing transaction of said user;
- recording dispensing transaction data comprising the identity of said authorized user and the item identification, as well as withdrawal timing information;
- determining the termination of said dispensing transaction and automatically locking said output unit in response to the termination of said dispensing transaction; and
- transmitting said recorded dispensing transaction data to at least one destination address.~~,~~ wherein said output unit further comprises a refrigerating or freezing device configured to cool or freeze the laboratory items in a plurality of zones, each zone having a different temperature, or to cool or freeze the laboratory items within a zone, the zone having a temperature gradient.

17. (Previously Presented) The method according to claim 16, wherein the termination of said dispensing transaction is determined by sensing that a predetermined period of time after unlocking of said output unit or a dispensing transaction has passed.

18. (Previously Presented) The method according to claim 16, wherein the termination of said dispensing transaction is determined by sensing an indication of the termination entered by said user.

19. (Previously Presented) The method according to claim 16, comprising:

- storing the number of currently available items in said memory device;
- updating said number after the termination of a dispensing transaction according to said recorded dispensing transaction data; and
- transmitting a restocking request if said amount is less than a predetermined threshold amount.

20. (Previously Presented) The method according to claim 16, comprising:

- outputting recorded dispensing transaction data by printing out or displaying said data.

21. (Previously Presented) The method according to claim 16, wherein said user is authenticated by:

- reading a personal identification module;
- comparing personal authentication data read from said identification module with previously stored authentication data; and
- issuing an authentication signal upon a match of the compared authentication data.

22. (Previously Presented) The method according to claim 16, wherein said personal identification module is locked during a dispensing transaction, and released only after said output unit has been locked subsequent to the termination of a dispensing transaction.

23. (Previously Presented) The method according to claim 16, wherein a personal identification code is received from said user and compared with a personal identification code stored on said personal identification module, wherein said authentication signal is issued only upon a match of both codes.

24. (Previously Presented) The method according to claim 23, comprising:

- recording said personal identification code upon a successful authentication; and
- deleting said personal identification code from said personal identification module.

25. (Previously Presented) The method according to claim 21, comprising writing dispensing transaction data to said personal identification module.

26. (Previously Presented) The method according to claim 16, wherein said user is authenticated by:

- scanning biometrical data of said user;

- comparing said biometrical data with previously stored biometrical data; and
- issuing an authentication signal upon a match of the compared biometrical data.

27. (Previously Presented) The method according to claim 16, comprising transmitting dispensing transaction data to a web site.

28. (Previously Presented) The method according to claim 16, comprising preparing and sending an electronic mail containing dispensing transaction data to at least one address.

29. (Previously Presented) The method according to claim 16, comprising preparing and sending a short message (SMS) containing dispensing transaction data to at least one phone number.

30. (Previously Presented) The method according to claim 19, comprising:

- receiving restocking data comprising an item identification and an amount of restocked items; and
- updating said number of available items.

31. (Previously Presented) The method according to claim 16, wherein said output unit comprises at least two trays for dispensing items, wherein said unlocking of said output unit comprises:

- selectively unlocking at least one of said trays depending on said authorization of said user.

32. (Previously Presented) The method according to claim 16, wherein said output unit comprises at least two trays for dispensing items, comprising:

- receiving an item selection from said user and unlocking at least one of said trays corresponding to said selection.

33. (Previously Presented) A system for dispensing laboratory items, comprising:

- at least one dispensing station, comprising:

  an input terminal configured to identify a user and to authenticate said user, the input terminal comprising an access device configured to receive a personal identification module from said user, wherein said access device is adapted to read personal authentication data stored on said personal identification module;

a central processing unit connected to said input terminal;

an output unit comprising a sensor device connected to said central processing unit and a refrigerating or freezing device configured to cool or freeze the laboratory items in a plurality of zones, each zone having a different temperature, or to cool or freeze the laboratory items within a zone, the zone having a temperature gradient;

a memory device connected to said central processing unit; and

a communication interface for transceiving data, connected to said central processing unit;

wherein said output unit comprises a locking mechanism configured to unlock said output unit to allow access to said user and to close and lock said output unit to prevent unauthorized access,

wherein said output unit is configured to store at least a first group of laboratory items arranged in a first order, wherein at least one item of said first group is located in a dispensing position in preparation for withdrawal from said output unit by said user,

wherein said sensor device is positioned in the vicinity of said dispensing position to detect the withdrawal,

wherein said memory device is adapted to store dispensing transaction data comprising the identity of said user, the item group of said item, and withdrawal timing information, and

wherein said central processing unit is adapted to control said locking mechanism to unlock said output unit upon successful authentication of said user, to close and lock said output unit upon termination of a dispensing transaction, wherein said central processing unit is adapted to read dispensing transaction data from said memory and to send it to said communication interface; and

a computer system comprising at least one communication interface;

wherein said at least one communication interface is adapted to connect with said at least one dispensing station, to receive dispensing transaction data.

34. (Canceled)

35. (Previously Presented) A computer readable medium that includes a program executing steps for dispensing laboratory items, the program execution comprising:

cooling or freezing the laboratory items in a plurality of zones, each zone having a different temperature, or within a zone, the zone having a temperature gradient;

identifying and authenticating a user based on an identification module provided by the user;

unlocking an output unit for withdrawal of items by said authenticated user;

sensing a dispensing transaction of said user;

recording dispensing transaction data comprising the identity of said authorized user and the item identification, as well as withdrawal timing information;

determining the termination of said dispensing transaction;

locking said output unit; and

transmitting said recorded dispensing transaction data to at least one destination address.

36. (Previously Presented) A computer readable medium that includes a program, downloadable from a server, executing steps for dispensing laboratory items, the program execution comprising:

cooling or freezing the laboratory items in a plurality of zones, each zone having a different temperature, or within a zone, the zone having a temperature gradient;

identifying and authenticating a user based on an identification module provided by the user;

unlocking an output unit for withdrawal of items by said authenticated user;

sensing a dispensing transaction of said user;

recording dispensing transaction data comprising the identity of said authorized user and the item identification, as well as withdrawal timing information;

determining the termination of said dispensing transaction;

locking said output unit; and

transmitting said recorded dispensing transaction data to at least one destination address.

37. (Previously Presented) A computer data signal embodied in a carrier wave and representing a program that instructs a computer to perform steps for dispensing laboratory items, the program instruction comprising:

cooling or freezing the laboratory items in a plurality of zones, each zone having a different temperature, or within a zone, the zone having a temperature gradient;

identifying and authenticating a user based on an identification module provided by the user;

unlocking an output unit for withdrawal of items by said authenticated user;

sensing a dispensing transaction of said user;

recording dispensing transaction data comprising the identity of said authorized user and the item identification, as well as withdrawal timing information;

determining the termination of said dispensing transaction;

locking said output unit; and

transmitting said recorded dispensing transaction data to at least one destination address.

38. (Previously Presented) An unmanned dispensing station for laboratory items, comprising:

- an input terminal for identifying a user and authenticating said user;
- a central processing unit connected to said input terminal;
- an output unit comprising a sensor device connected to said central processing unit;
- a memory device connected to said central processing unit; and
- a communication interface for transceiving data, connected to said central processing unit;

wherein said output unit comprises a locking mechanism to unlock said output unit for access of said user and to close and lock said output unit to prevent unauthorized access,

wherein said output unit is configured to contain at least a first group of laboratory items arranged in a first order with at least one item of said first group located in a dispensing position, to be withdrawn from said output unit by said user,

wherein said sensor device is positioned in the vicinity of said dispensing position to detect a withdrawal,

wherein said memory device is adapted to store dispensing transaction data comprising the identity of said authorized user and the item group of said item, as well as withdrawal timing information,

wherein said central processing unit is adapted to control said locking mechanism to unlock said output unit upon successful authentication of said user, and to close and lock said output unit upon termination of a dispensing transaction, wherein said central processing unit is adapted to read dispensing transaction data from said memory and to send it to said communication interface,

and wherein said output unit further comprises a refrigerating or freezing device configured to cool or freeze the laboratory items in a plurality of zones, each zone having a different temperature, or to cool or freeze the laboratory items within a zone, the zone having a temperature gradient